

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

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Paper No. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte ANDREW MICHAEL YELLOP  
and FRANK MARS

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Appeal No. 2002-1770  
Application 09/200,509<sup>1</sup>

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ON BRIEF

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Before BARRETT, FLEMING, and GROSS, Administrative Patent Judges.  
BARRETT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the final rejection of claims 1-5, 7, and 9-19. Claims 6 and 8 are objected to.

We affirm-in-part.

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<sup>1</sup> Application for patent filed November 25, 1998, entitled "Currency Validation Apparatus and Method," which claims the foreign filing priority benefit under 35 U.S.C. § 119 of United Kingdom Application 9725393.4, filed November 28, 1997.

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BOARD OF PATENT APPEALS  
AND INTERFERENCES

BACKGROUND

The invention relates to a method and apparatus for validating articles of currency. A currency validator operates by comparing measured properties of inserted articles with acceptance criteria. It is necessary to ensure that all the validation operations required for every type of coin which the apparatus is designed to accept can be performed in the time available in a validation period before an accept/reject decision must be made to indicate whether or not the coin is valid. On the other hand, in high speed coin validators there is very little time available between measuring the properties and issuing the accept/reject signal. The disclosed invention provides for checking an article after the accept/reject decision is made so that the type of the article can still be determined, and reconfiguring the validation operation so that the criteria for that type of article will be considered during the next validation operation prior to the time when the accept/reject signal is generated. This optimizes the performance of the validator in accordance with the use.

Claim 1 is reproduced below.

1. A method of validating articles of currency, comprising:  
checking, prior to determining whether or not the article is to be accepted or rejected, the measured properties of an article against a plurality of sets of criteria, each set corresponding to a predetermined type of article;

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determining whether the article is a valid type of one of the predetermined types and issuing a signal indicative of whether the article is to be accepted or rejected; and

subsequently determining whether the measured properties meet at least one further set of criteria of an article of a different type.

The examiner relies on the following references:

Griner	4,936,435	June 26, 1990
Best	5,355,989	October 18, 1994

Claims 1, 9, and 11 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Griner.

Claims 14-19 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Best.

Claims 2-5, 7, 10, 12, and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Griner and Best.

We refer to the final rejection (Paper No. 10) (pages referred to as "FR\_\_") and the examiner's answer (Paper No. 18) for a statement of the examiner's rejection, and to the brief (Paper No. 17) (pages referred to as "Br\_\_") and reply brief (Paper No. 19) (pages referred to as "RBr\_\_") for a statement of appellants' arguments thereagainst.

#### OPINION

##### Grouping of claims

Appellants state that claims 1-11 stand or fall together, claims 12 and 13 stand or fall together, and claims 14-19 stand or fall together (Br4), but argue claims 1, 9, and 11 separately

(Br5), argue each of claims 14-19 separately (Br7-9), and argue claims 12 and 2 separately (Br11-12). Although the examiner states that the claims in each rejection stand or fall together (EA2-3), the examiner addresses most of the arguments, so we will not remand the case for consideration of the arguments. Each claim that is argued will be separately considered.

Claims 1, 9, and 11

Claim 1

The examiner reads the limitation of "checking, prior to determining whether or not the article is to be accepted or rejected, the measured properties of an article against a plurality of sets of criteria, each set corresponding to a predetermined type of article" on checking the measured properties of a coin against the sets of criteria for a nickel and a quarter in Fig. 4, and reads the limitation of "determining whether the article is a valid type of one of the predetermined types and issuing a signal indicative of whether the article is to be accepted or rejected" on determining whether the coin is a nickel or a quarter (these are the "predetermined types"), and reads the limitation of "subsequently determining whether the measured properties meet at least one further set of criteria of an article of a different type" on determining whether the coin is a dime (which is a "different type") (FR2; EA4-5).

Appellants argue that it illogical to interpret Griner in the manner suggested by the examiner (RBr2): "In particular, if a coin is tested to see if it is a dime, then it cannot yet have been rejected because then there could be no reason to be testing it. And once a coin is accepted as either a nickel, quarter or dime Griner does not teach to make a subsequent determination concerning at least one further set of criteria."

We agree with the examiner that claim 1 is broad enough to read on Griner in the manner discussed. It is noted that the "NO" and "YES" decisions from the blocks 410 and 420 in Fig. 4 of Griner are signals, in the microprocessor, indicative of whether the article is to be accepted or rejected. The point at which "the article is to be accepted or rejected" is not defined in claim 1, e.g., there is no limitation about accepting or rejecting the article within a specific time or validation period and making a subsequent determination after that time; nor does claim 1 state that the step of "subsequently determining" cannot result in accepting or rejecting the article. Therefore, nothing precludes the point at which "the article is to be accepted or rejected" being defined as the point after the quarter check at step 420. Appellants' argument does not address the examiner's interpretation of a dime as not being a "predetermined type of article" and as being an "article of a different type" and does not point out the error in this interpretation. The language of

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claim 1 is broad enough to read on Griner. We sustain the rejection of claim 1.

Claim 9

The examiner states that the limitation "in which a said further one of the sets of criteria represents an article which is to be rejected" in dependent claim 9 is only a statement of intended use and, if, for some reason the operator of the machine of Griner does not want to accept dimes, they can be returned with the rejected coins (EA5). It is noted that the examiner did not address claim 9 in the final rejection.

Appellants argue that the criteria in Griner represent articles which are to be accepted, whereas claim 9 refers to one of the sets of criteria representing an article to be rejected and, therefore, an article which has been found to meet these criteria would lead to a routing of that article to the reject path (RBr2).

We disagree with the examiner's reasoning about changing the machine to not accept dimes since this would require a modification of Griner, which would preclude anticipation. Nevertheless, we interpret claim 9 to be broad enough, as drafted, to read on Griner. A set of criteria which represents an article to be accepted can also be considered a set of criteria for an article to be rejected. For example, if a penny is tested, the criteria for the dime will cause it to be

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rejected. Thus, the set of criteria for acceptance of the dime in Griner is a set of criteria representing articles to be rejected. The rejection of claim 9 is sustained.

Claim 11

The examiner finds that storing the number of acceptable articles is nothing more than the normal value accumulator that is used in all coin operated machines and the value of the coins is stored so that the appropriate charge can be made and the appropriate change can be returned (EA5-6). It is noted that the examiner did not address claim 11 in the final rejection.

Appellants argue that the examiner is incorrect because a credit accumulator merely identifies the total value of accepted articles (and only for a single transaction) and it is not possible to deduce from that how many articles of a particular type have been received (RBr3).

We agree with appellants' arguments. The actual limitation of claim 11 is "storing data indicating the number of articles which have met at least one further set of criteria in such a manner as to enable downloading of the data." The conventional value accumulator keeps track of overall value, it does not keep track of the number of coins that had a certain value or do so "in such a manner as to enable downloading of the [number] data." The rejection of claim 11 is reversed.

Claims 14-19

The examiner's complete reasoning for the rejection of claims 14-19 is (FR2): "The criteria for the counterfeit coins can be prevented from being considered by selecting the K' acceptance band or allowed to be considered by selecting the K acceptance band."

Appellants argue that Best does not teach checking measured properties against a plurality of different sets of criteria, wherein each set corresponds to a different predetermined type of article, as recited in claims 14 and 15 (Br7-8).

The examiner responds that Best discloses at column 1, lines 27-36, accepting a plurality of denominations and having an acceptance band for each denomination, where each acceptance band comprises a set of criteria for a particular denomination (EA6).

We agree with the examiner that Best accepts a plurality of coin denominations and must have a plurality of sets of criteria, each set corresponding to a particular coin denomination. Best also discloses that two or more properties of a coin can be measured and compared (col. 5, lines 42-44). Accordingly, this argument by appellants is not persuasive.

Appellants argue with respect to claim 14 that Best does not utilize a discrete set of criteria for a counterfeit coin as stated by the examiner and, thus, does not prevent "the criteria



for the counterfeit coin" from being considered by selecting the narrow acceptance band, as suggested by the examiner (Br7).

We do not find where the examiner addresses this argument. We agree with appellants that Best does not have a set of criteria for a counterfeit coin that is not considered. The narrow acceptance band K' and the normal acceptance band K are for the same coin, and claims 14-19 do not read on substituting one acceptance band for another as will be explained.

It is argued that Best does not teach altering a set of denominations to be checked (Br7).

The examiner responds (EA6):

[T]he claims do not include the limitation that the set of denominations is altered. Rather, the claims state that the criteria for acceptance is altered or rendered ineffective. The switching from one range K to the other range K' in Best is altering the set of criteria that defines an acceptable coin of a particular denomination. The particular denomination is still accepted but a different set of criteria is used to determine if the coin is of that denomination.

Appellants reply (RBr4):

[C]laims 14-19 recite methods and apparatus involving an automatic operation that results in either or both of (a) a denomination which was not previously acceptable becoming acceptable (claims 15 and 17 to 19), or (b) a denomination which was previously acceptable is no longer acceptable (claims 14, 16, 18, and 19). The language of these claims clearly recites such operation. Therefore, it is wrong to state that "the claims do not include the limitation that the set of denominations is altered." Further, the statement that "the claims state that the criteria for acceptance is altered..." is inaccurate. The claims only refer to making the criteria effective or ineffective. Most crucially, the Examiner admits that Best teaches that the

"particular denomination is still accepted". Consequently, Best does not change which denominations are accepted.

Claim 14

It appears that the examiner's rejection is based on a misinterpretation of the claim language. The limitation at issue in claim 14 is "automatically preventing a single one of the sets of criteria, associated with a predetermined type of article, from being considered during a validation period of a subsequent validation operation." This might happen, for example, if the memory contents containing a set of criteria for an inserted coin are exchanged for the memory contents of a coin which was one of the predetermined coins (see specification, p. 14); the coin which was a predetermined coin is then not considered during a validation period. The "one of the sets of criteria" is not just any criteria, such as K or K', but is a "set [of criteria] corresponding to a predetermined type of article" that is checked during a validation period, as previously defined in claim 14. Claim 14 does not say that the criteria for acceptance of an article is altered. Instead, the set of criteria for the article is not considered. Thus, preventing a set of criteria from being considered means that an article (corresponding to a certain currency denomination) which was checked in the validation period is not considered during the next validation period. The rejection of claim 14 is reversed.

Claim 15

Claim 15 recites "automatically causing a single different set of criteria, associated with a different type of article, to be considered during a validation period of a subsequent validation operation." This might happen, for example, if the set of criteria for an inserted coin, which was not one of the predetermined types, is written into the memory contents which holds sets of criteria for coins of predetermined types (see specification, p. 14); the coin will be considered during the next validation period. Claim 15 requires a different set of criteria for a different article, not a different set of criteria for the same article, such as substitution of K' criteria for K criteria, as in the examiner's rejection. The rejection of claim 15 is reversed.

Claim 16

Claim 16 recites "wherein the apparatus is capable of responding to recognition of a single article of one of the predetermined types by automatically preventing one of the sets of criteria from being effective during a subsequent validation operation, and then preventing incrementing of the credit count for the predetermined type of article." For example, in appellants' Fig. 4, the activity flag "A" indicates whether a set of criteria is enabled to be effective during a validation operation ("R") or is not effective during a validation operation

("L") based on the usage count "US" (i.e., the credit count) for that article. A set of criteria may be prevented from being effective during a subsequent validation operation if, for example, a set of criteria changes from being effective ("R") to being ineffective ("L") based on the usage count "US." The limitation about preventing a set of criteria from being effective during a subsequent validation operation is similar to the method limitation in claim 14. The rejection of claim 16 is reversed for the reasons stated with respect to claim 14. In addition, appellants argue that Best does not teach preventing incrementing of a credit count for the predetermined type of article (Br8), and we also find no teaching of this in Best. For this additional reason, the rejection of claim 16 is reversed.

Claim 17

Claim 17 is the converse of claim 16 and recites "wherein the apparatus is capable of responding to recognition of a single article of one of the predetermined types by automatically enabling a set of criteria, to be effective during a subsequent validation operation, thus enabling incrementing of the credit count when the predetermined type of article is recognized." The limitation about enabling a set of criteria to be effective during a subsequent validation operation is similar to the method limitation in claim 15 except that it does not expressly recite a different set of criteria associated with a different type of

article. Nevertheless, since a "set of criteria" corresponds to an article, and since enabling a set of criteria for an article means that it was not previously enabled, it is implied that the set of criteria is for a different article. The rejection of claim 17 is reversed for the reasons stated with respect to claim 15. In addition, appellants argue that Best does not teach enabling incrementing of a credit count (Br9), and we also find no teaching of this in Best. For this additional reason, the rejection of claim 17 is reversed.

Claims 18 and 19

Claims 18 and 19 contain limitations very similar to claims 14 and 15. The rejection of claims 18 and 19 is reversed for the reasons stated with respect to claims 14 and 15.

Claims 2-5, 7, 10, 12, and 13

Claims 2-5 and 7

Claim 2 depends on claim 1 and recites "wherein the combination of sets which are checked prior to issuing the signal is altered."

The examiner finds Best discloses in column 5, lines 42-55, altering the sets of criteria between wide and narrow bands before an accept signal is issued (FR3-4; EA8). The examiner concludes that it would have been obvious to modify Griner to include means to alter the criteria prior to acceptance of coins

by switching between narrow and wide bands to limit the number of coins erroneously rejected (FR4).

Appellants argue that the phrase "prior to issuing the signal" applies to the term "checked" and, thus, it is the combination of sets which has been checked prior to issuing an accept or reject signal that is altered (RBr5). It is argued that Best does not teach this operation (RBr5).

Claim 2 calls for altering the "combination of sets which are checked," not altering the set of criteria for an article as would result from the examiner's proposed modification. The examiner has not established a prima facie case of obviousness. The rejection of claims 2-5 and 7 is reversed.

Claim 10

Claim 10 has not been separately argued and, therefore, stands or falls with claim 9. 37 CFR § 1.192(c)(7) (2000). The rejection of claim 10 is sustained.

Claims 12 and 13

Claim 12 recites checking properties against a plurality of sets of criteria "wherein the criteria relating to respective types of articles are considered in sequence, and the sequence is altered for a subsequent validation operation."

The examiner states (EA8): "It is the examiner's position that altering any part of a sequence is altering the sequence.

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Therefore, altering one of the acceptance bands from K to K' in the sequence of checking the coins in Best is altering the sequence."

Appellants argue that Best only teaches changing the width of the acceptance band for a particular article and does not teach changing the sequence within which respective articles are considered (RBr4).

We agree with appellants that claim 12 requires altering the sequence of considering the criteria, and that altering a criteria for one article does not change the sequence. The examiner has failed to establish a prima facie case of obviousness. The rejection of claim 12 and its dependent claim 13 is reversed.

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## CONCLUSION


The rejection of claims 1, 9, and 10 is sustained.

The rejections of claims 2-5, 7, and 11-19 are reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

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LEE E. BARRETT  
Administrative Patent Judge

  
MICHAEL R. FLEMING  
Administrative Patent Judge

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